4.8 HAZARDS and HAZARDOUS MATERIALS

This section analyzes the impacts associated with exposure to hazards and hazardous materials. Impacts relating to hazardous materials use or development on contaminated sites, transportation of hazardous materials, exposure to wildland fire hazards and airport safety hazards are addressed. Geological and hydrological hazards are described in Sections 4.6, *Geology*, and 4.9, *Hydrology and Water Quality*, of this EIR, respectively.

4.8.1 Setting

a. Hazardous Materials. The federal government defines a hazardous material as a substance that is toxic, flammable/ignitable, reactive, or corrosive. Extremely hazardous materials are substances that show high or chronic toxicity, carcinogenic, bioaccumulative properties, persistence in the environment, or that are water reactive. Improper use, storage, transport, and disposal of hazardous materials and waste may result in harm to humans, surface and groundwater degradation, air pollution, fire, and explosion. The risk of hazardous material exposure can come from a range of sources; these may include household uses, agricultural/commercial/industrial uses, transportation of hazardous materials, and abandoned industrial sites known as brownfields.

Use, Storage, and Handling of Hazardous Materials. Numerous federal, state, and local regulations regarding use, storage, transportation, handling, processing and disposal of hazardous materials and waste have been adopted since the passage of the federal Resource Conservation and Recovery Act (RCRA) of 1976. The goal of RCRA is to assure adequate tracking of hazardous materials from generation to proper disposal. California Fire Codes (CFC) Articles 79, 80 et al., which augment RCRA, are the primary regulatory guidelines used to govern the storage and use of hazardous materials. The CFC also serves as the principal enforcement document from which corresponding violations are written.

Hazardous substances include both hazardous wastes and hazardous materials. In general, a material or waste is classified as hazardous if it is one of more than 700 chemicals specifically listed in the California Code of Regulations; if it contains one of these chemicals; or if it is reactive, ignitable, corrosive, or toxic. Because of their potential threat to public health and the environment, hazardous substances are closely regulated by federal, state, and local laws that focus on controlling their production, handling, storage, transportation, and disposal.

Federal and state environmental laws provide that all property owners be required to pay for cleanup, when necessary, of contamination by hazardous materials on or originating from their land. Because of the potential liability, purchasers or developers of commercial, industrial, or agricultural property should perform environmental assessments before development or purchase. In addition to being liable for cleanup, the owner can be responsible for toxic effects on human health, and measures should be taken to avoid exposing people to hazardous materials.

Pursuant to SB 1082 (1993), the State of California adopted regulations to consolidate six hazardous materials management programs under a single, local agency, known as the

Certified Unified Program Agency (CUPA). In addition to conducting annual facility inspections, the Hazardous Materials Program is involved with hazardous materials emergency response, investigation of the illegal disposal of hazardous waste, public complaints, and storm water illicit discharge inspections. In January 1997, the Tuolumne County Environmental Health Division of the Community Resources Agency was designated as the CUPA by the Secretary of the California Environmental Protection Agency (CalEPA) for Tuolumne County. Accordingly, it is the Environmental Health's Division responsibility to prevent public health hazards in the community and to ensure the safety of water and food. The Environmental Health Division (EHD) coordinates activities with federal, state, and regional agencies when planning programs that deal with the control of toxic materials, housing conditions, nuisance complaints, protection of food and water supply, public bathing areas, and sewage and solid waste.

Household Products. By far the most common hazardous materials are those found or used in the home. Waste oil is a common hazardous material that is often improperly disposed of and can contaminate surface water through runoff. Other household hazardous wastes (used paint, pesticides, cleaning products and other chemicals) are common and often improperly stored in garages and homes throughout the community. Tuolumne County adopted the Household Hazardous Waste Element of the Tuolumne County Integrated Waste Management Plan to reduce the amount of household hazardous waste generated within Tuolumne County through reuse and recycling, to divert household hazardous waste from landfills, to promote alternatives to toxic household products, and to educate the public regarding household hazardous waste management. As part of this, the County operates recyclable household hazardous waste collection at the Cal Sierra Transfer Station in East Sonora and the Groveland Transfer Station in Groveland and collection events for non-recyclable household hazardous waste, organized by the Solid Waste Division of the Community Resources Agency, to remove household hazardous wastes from the waste stream. The Solid Waste Division also operates a household hazardous waste collection facility at the former Jamestown Mine. This facility is open by appointment, one day per month.

Commercial and Industrial Uses. Users of hazardous materials include commercial manufacturing, petroleum exploration, industrial fabrication, biotechnology, and agribusinesses. Potentially hazardous materials used by businesses may include petroleum based fuels, chlorinated solvents, acrylic coatings, corrosive or caustic additives, and to a lesser extent, chemical fertilizers, pesticides and herbicides. The majority of current users of hazardous materials include gas stations and other automotive service-related business, utilities, agribusinesses, and other commercial and industrial uses.

Businesses handling more than specified reportable quantities of any hazardous material are required to disclose certain information to EHD via a hazardous materials business plan. Risk Management Plans (RMPs) are required to be developed by certain businesses that handle more than a threshold quantity of certain regulated "acutely hazardous" substances (primarily toxic gasses and pesticides) under the California Accidental Release Prevention (Cal ARP) program. The purpose of the Cal ARP program is to prevent the accidental releases of regulated substances.

Gas stations and industrial activities located next to roadways in the plan area may have released hazardous materials to the environment in the past. Leaking Underground Storage Tanks (LUSTs) have been identified throughout Tuolumne County, including the communities of Jamestown, Sonora, Tuolumne, and Columbia (State Water Resources Control Board).

Hazardous Materials Transportation. Major access routes to Tuolumne County include State Routes 49, 108, and 120. Tuolumne County is served by the Sierra Railroad, which operates between Standard in Tuolumne County and Oakdale in Stanislaus County, where it connects to the Southern Pacific and Santa Fe Railroads. The Sierra Railroad has 49 miles of track that has been in operation since 1897. The Sierra Railroad is vital to the local economy, providing local industry with access to distant markets. Additionally, the railroad provides historical excursions and scenic opportunities. Despite the importance of the Sierra Railroad, the condition of the track has been in decline since 1980 when freight usage decreased significantly. Modern capacity freight cars are not able to access lumber mills and passenger train excursions have been curtailed, limiting access to Sonora, due to safety reasons.

Both the USEPA and the United States Department of Transportation (DOT) regulate the overall transportation of hazardous waste and material, including transport via highway and rail. The USEPA administers permitting, tracking, reporting, and operations requirements established by the RCRA. DOT regulates the transportation of hazardous materials through implementation of the Hazardous Materials Transportation Act. This Act administers container design, and labeling and driver training requirements. These established regulations are intended to track and manage the safe interstate transportation of hazardous materials and waste.

Transportation of hazardous materials on highways falls under federal legislation; however, authority is delegated to various state and local agencies that are focused on specific aspects of hazardous materials and transportation. The Hazardous Waste Control Act establishes the California Department of Health Services (DHS) as the lead agency in charge of the implementation of the RCRA program. State and local agencies such as the CHP, State of California Department of Transportation (Caltrans), and the City and County Fire Departments are responsible for the enforcement of state and federal regulations and responding to hazardous materials transporting emergencies. The CHP establishes state and federal hazardous material truck routes and has lead responsibility over hazardous material spills on State highways.

Soil Contamination. Regulatory agencies such as the USEPA, Department of Toxic Substance Control, and Department of Environmental Health Hazard Assessment set forth guidelines that list at what point concentrations of certain contaminants pose a risk to human health. The USEPA combines current toxicity values of contaminants with exposure factors to estimate the maximum concentration of a contaminant that can be in environmental media before it is a risk to human health. These concentrations set forth by the USEPA are termed Preliminary Remediation Goals (PRGs) for various pollutants in soil, air, and tap water. PRG concentrations can be used to screen pollutants in environmental media, trigger further investigation, and provide an initial cleanup goal. PRGs for soil contamination have been developed for industrial sites and residential sites. Residential PRGs are more conservative and take into account the possibility of the contaminated environmental media coming into contact with sensitive receptor sites such as nurseries and schools. PRGs consider exposure to

pollutants by means of ingestion, dermal contact, and inhalation, but do not consider impacts to groundwater.

Groundwater Contamination. Both the USEPA and the California DHS regulate the concentration of various chemicals in drinking water. The California DHS thresholds are generally stricter than the USEPA thresholds. Primary maximum contaminant levels (MCLs) are established for a number of chemical and radioactive contaminants (Title 22, Division 4, Chapter 15 California Code of Regulations). MCLs are often used by regulatory agencies to determine cleanup standards when groundwater is affected with contaminants.

Brownfield Sites. Brownfield sites are areas with actual or perceived contamination and that may have potential for redevelopment or reuse. Brownfields are often former industrial facilities that were once the source of jobs and economic benefits to the community, but lie abandoned due to fears about contamination and potential liability. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Over five years, $1.6 billion was collected and the tax went into a fund for cleaning up abandoned or uncontrolled hazardous waste sites. CERCLA was amended in January of 2002 with passage of the Small Business Liability Relief and Brownfields Revitalization Act. This Act provides some relief for small businesses from liability under CERCLA. It authorizes $200 million per fiscal year through 2006 to provide financial assistance for brownfield revitalization. CERCLA also facilitated a revision of the National Contingency Plan (NCP), which provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the generation of the USEPA's National Priorities List (NPL), a list of all the sites with known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. According to the NPL database, there are no Superfund sites within Tuolumne County (US EPA, July 2015).

The State Water Resources Control Board regulates spills, leaks, investigation, and cleanup sites and maintains an online database, GeoTracker, to provide access to environmental data (State Water Resources Control Board). The GeoTracker database tracks regulatory data about leaking underground storage tank (LUST) sites, fuel pipelines, and public drinking water supplies and presents it in a geographic information system format. GeoTracker contains 132 records for Tuolumne County, exclusive of the City of Sonora. The database indicates that there are 30 Permitted USTs and 102 are cleanup or disposal sites. Of the 102 cleanup or disposal sites, there are 81 LUST Cleanup Sites, 1 Military Cleanup Site, 10 Land Disposal Sites, and 10 Cleanup Program Sites within Tuolumne County. Over half of these records, 70, are completed, closed cases. The remaining 32 are open or undergoing site assessment, remediation, or monitoring. The majority of these open cases are associated with gas stations or other automotive service related uses, mini-markets, warehouses, or industrial sites. These open cases are mainly located in the larger communities of Columbia, Tuolumne, and Groveland. However a few are located away from developed communities along SR 120 and SR 108.

The California Department of Toxic Substances Control also maintains a list of cleanup sites and hazardous waste permitted facilities on their EnviroStor database (Department of Toxic Substances Control). The EnviroStor database has 16 records for Tuolumne County, one of which is active. Located on SR 108 in Cold Springs, soil on the site was found to contain excess soluble lead, copper, and antimony and constituents above hazardous waste levels from use as a logging an disposal site (DTSC).

Landfills. Landfills are classified by their permitted contents. Class I landfills are permitted to accept toxic or hazardous substances. Class II landfills are permitted to accept chemically or biologically decomposable substances. Class III landfills are permitted to accept non-water soluble, non-decomposable inert solids. As part of this analysis, a review of CalRecycle's searchable Solid Waste Information System (SWIS) database was completed for the County. The SWIS database tracks regulatory information on solid waste facilities, operations, and disposal sites throughout the State of California. The database includes information on landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites, and closed disposal sites. The database tracks regulatory information regarding the site location, owner, operator, the facility type, operational status, regulatory enforcement records, and inspections. The SWIS database contains 17 records for Tuolumne County, 12 of which are closed. The five remaining sites are active and described below:

- *Pinecrest Transfer Station* – SWIS No. 55-AA-0003; located at Nw Hwy 108; End of Pinecrest Dump Rd in Pinecrest; status: active; classification: solid waste operation; activity: limited volume transfer operation; accepted wastes include: mixed municipal
- *Cal Sierra Transfer Station* – SWIS 55-AA-0010; located at 19309 Industrial Drive in East Sonora; status: active; classification: solid waste facility; activity: large volume transfer; accepted wastes include: industrial, mixed municipal
- *Big Oak Flat Transfer Station* – SWIS 55-AA-0011; located at 2mi SE of Big Oak Flat-End of Merrill Rd in Groveland; status: active; classification: solid waste facility; activity: medium volume transfer; accepted wastes include: mixed municipal
- *Blue Mountain Minerals* – SWIS 55-AA-0012; located at 24599 Marble Quarry Road in Columbia; status: active; classification: solid waste facility; activity: solid waste landfill for mining waste rock; regulatory status: exempt
- *Triple J Farms* – SWIS 55-AA-0013; located at 103330 La Grange Road in Jamestown; status: active; classification: solid waste operation; activity: composting operation; accepted wastes include: agricultural, manure, wood waste

Asbestos. Asbestos is a highly crumbly material often found in older buildings (typically pre-1979), typically used as insulation in walls or ceilings. It was formerly popular as an insulating material; however, it can pose a health risk when very small particles become airborne. In conformance with the Clean Air Act, the USEPA established the National Emissions Standards for Hazardous Air Pollutants (NESHAP) to protect the public. Under NESHAP, the Toxic Substances Control Act banned most spray-applied surfacing materials that contain asbestos beginning in 1973 as well as fireproofing or insulation for decorative purposes since 1978. The asbestos regulations under NESHAP control work practices during the demolition and renovation of institutional, commercial, or industrial structures. Following identification of friable asbestos, the Federal Occupational Safety and Health Administration

(OSHA) requires that asbestos trained and certified abatement personnel perform asbestos abatement and all asbestos containing material (ACM) removed from on-site structures shall be hauled to a licensed receiving facility and disposed of under proper manifest by a transportation company certified to handle asbestos.

Lead-Based Paint. Prior to the enactment of federal regulations limiting their use in the late 1970s, lead-based paint (LBP) was often used in residential construction. Lead is a highly toxic metal that was used for many years in products found in and around homes. Lead may cause a range of health effects, from behavioral problems and learning disabilities, to seizures and death. The primary source of lead exposure in residences is deteriorating LBP. Lead dust can form when LBP is dry scraped, dry sanded, or heated. Dust also forms when painted surfaces bump or rub together. LBP that is in good condition is usually not a hazard. Regulations for LBP are contained in the Lead-Based Paint Elimination Final Rule 24 CFR 33, governed by the U.S. Housing and Urban Development (HUD), requires sellers and lessors to disclose known LBP and LBP hazards to perspective purchasers and lessees. Additionally, all LBP abatement activities must be in compliance with California and Federal OSHA, and with the State of California DHS requirements. Only LBP trained and certified abatement personnel are allowed to perform abatement activities. All LBP removed from structures must be hauled and disposed of by a transportation company licensed to transport this type of material. In addition, the lead contaminated material must be taken to a landfill or receiving facility licensed to accept the waste.

Agricultural Pesticide Regulation. A variety of chemicals are used on agricultural crops in the County. A variety of pesticides, fungicides and herbicides are used in the cultivation of row crops. Some pesticides and herbicides are injected into the soil as fumigants, while fungicides are generally sprayed by crop dusters. The CalEPA's Department of Pesticide Regulations establishes regulations regarding agricultural chemical use. These regulations are designed to prevent pesticides from being used in such a way as to jeopardize or cause injury to others. Among these regulations is Section 6614 from Title 3 of the California Code of Regulations, which is included in part as follows:

> *(b) Notwithstanding that substantial drift will be prevented, no pesticide application shall be made or continued when:*
> *(1) There is a reasonable possibility of contamination of the bodies or clothing of persons not involved in the application process;*
> *(2) There is a reasonable possibility of damage to non-target crops, animals, or other public or private property;*
> *(3) There is a reasonable possibility of contamination of non-target public or private property, including the creation of a health hazard, preventing normal use of such property.*

b. Wildfire Hazards. The California Department of Forestry and Fire Protection (CalFire) is responsible for identifying the governmental agencies responsible for preventing and suppressing fires in all areas of the state. Within Tuolumne County, areas outside of the Stanislaus National Forest, Yosemite National Park, the City of Sonora, and Tuolumne City are State responsibility and CalFire is responsible for wildland fire protection. Tuolumne County

Fire Department has fourteen fire stations throughout the County. Impacts related to the provision of fire protection services are addressed in Section 4.13, *Public Services*.

Wildfire outbreaks occur routinely during Tuolumne County's dry season. Determination of wildland fire hazards is based on three major factors: fuel loading, weather conditions, and topography. In Tuolumne County, damaging fires are predominantly caused by vehicle and equipment use and arson. The local topography contains rugged terrain, including steep canyons, many of which are inaccessible. Severe fire weather occurs on 35% of the days during fire season in the majority of the county. This, combined with the terrain and high hazard fuels, increases the probability that large damaging fires will occur (Emergency Services Plan for Tuolumne County, June 2012). Wildland fires can wreak havoc on homes, recreational and commercial values, destroy fragile habitat, and threaten rare and endangered species. Wildland fires also damage scenic and aesthetic values in rural areas.

The area of Tuolumne County with the greatest wildland fire hazard, based on fuels, weather, and topography, is on the east side of the Highway 49 corridor. However, almost every community in Tuolumne County has been threatened by wildfires. Figure 4.8-1 shows the Fire Hazard Severity Zones in Tuolumne County, as designated by the Cal Fire.

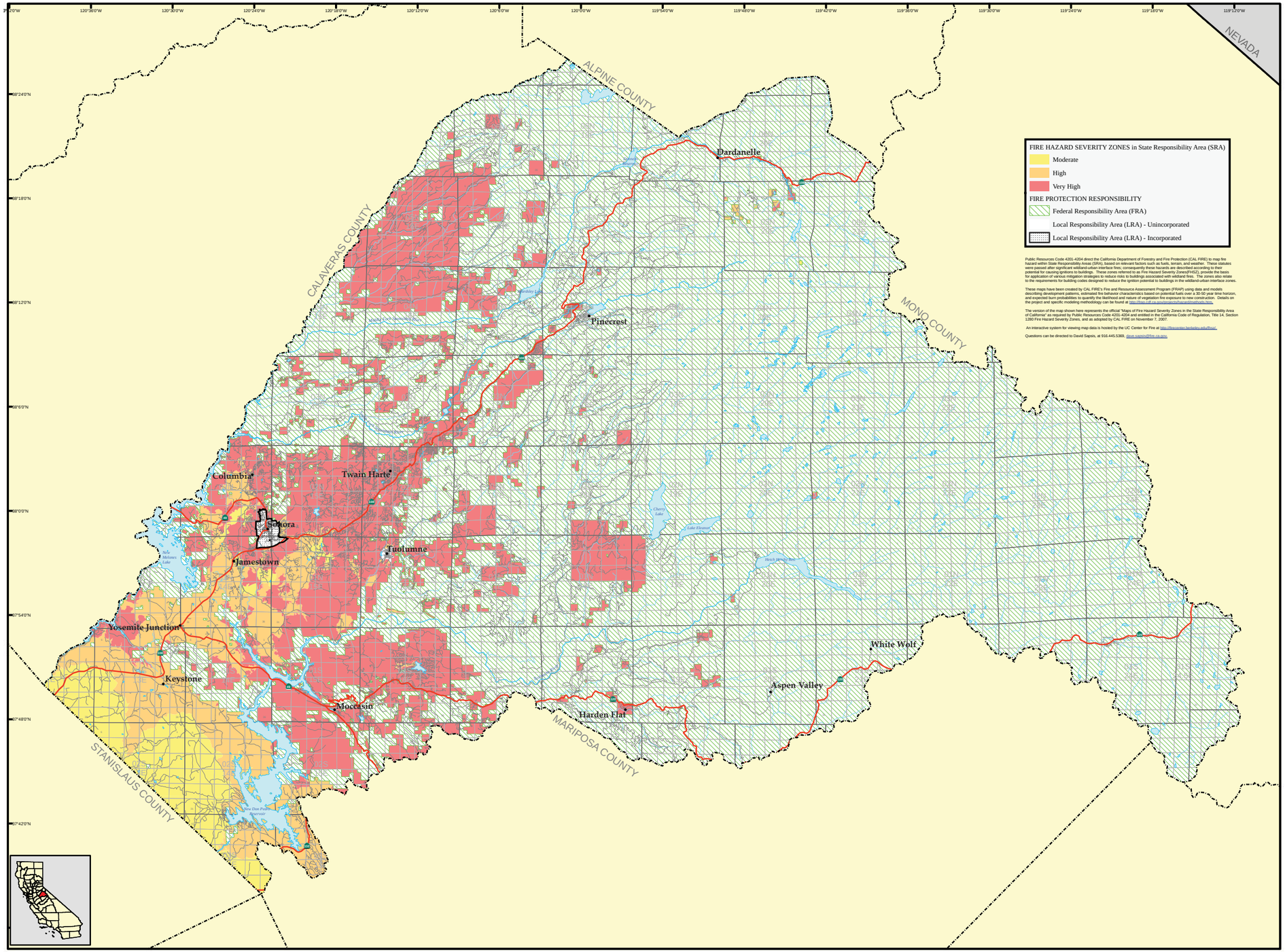
c. Airport Safety Hazards. There are two airports located in Tuolumne County, Columbia Airport and Pine Mountain Lake Airport. The Federal Aviation Administration requires runway protection zones and height limits on structures near airports to reduce risks to the public. In addition, the Tuolumne County Airport Land Use Compatibility Plan (ALUCP, 2003) designates safety zones for the areas surrounding the two airports. The ALUCP promotes compatibility between the airports in Tuolumne County and the land uses that surround them. The ALUCP is limited to roughly a 2-3 mile vicinity around the two airports. The Land Use Compatibility Plans for Columbia Airport and Pine Mountain Lake Airport are shown in Figures 4.8-2 and 4.8-3. Land uses prohibited by the ALUCP zones are described in Table 4.8-1.

Table 4.8-1. Airport Land Use Compatibility Zones

Zone	Location	Prohibited Uses
A	Runway Protection Zone or Within Building Restriction Line	• All structures except ones required by aeronautical function • Assemblages of people • Objects exceeding FAR Par 77 height limits • Aboveground bulk storage of hazardous materials • Hazards to flight
B1	Approach/Departure Zone and Adjacent to Runway	• Children's schools, day care centers, libraries • Hospitals, nursing homes • Highly noise-sensitive uses (e.g., outdoor theaters) • Above ground bulk storage of hazardous materials • Hazards to flight
B2	Extended Approach/Departure Zone	
C	Common Traffic Pattern	• Children's schools, day care centers, libraries • Hospitals, nursing homes • Hazards to flight
D	Other Airport Environs	• Hazards to flight

Source: Tuolumne County Airport Land Use Compatibility Plan, 2003

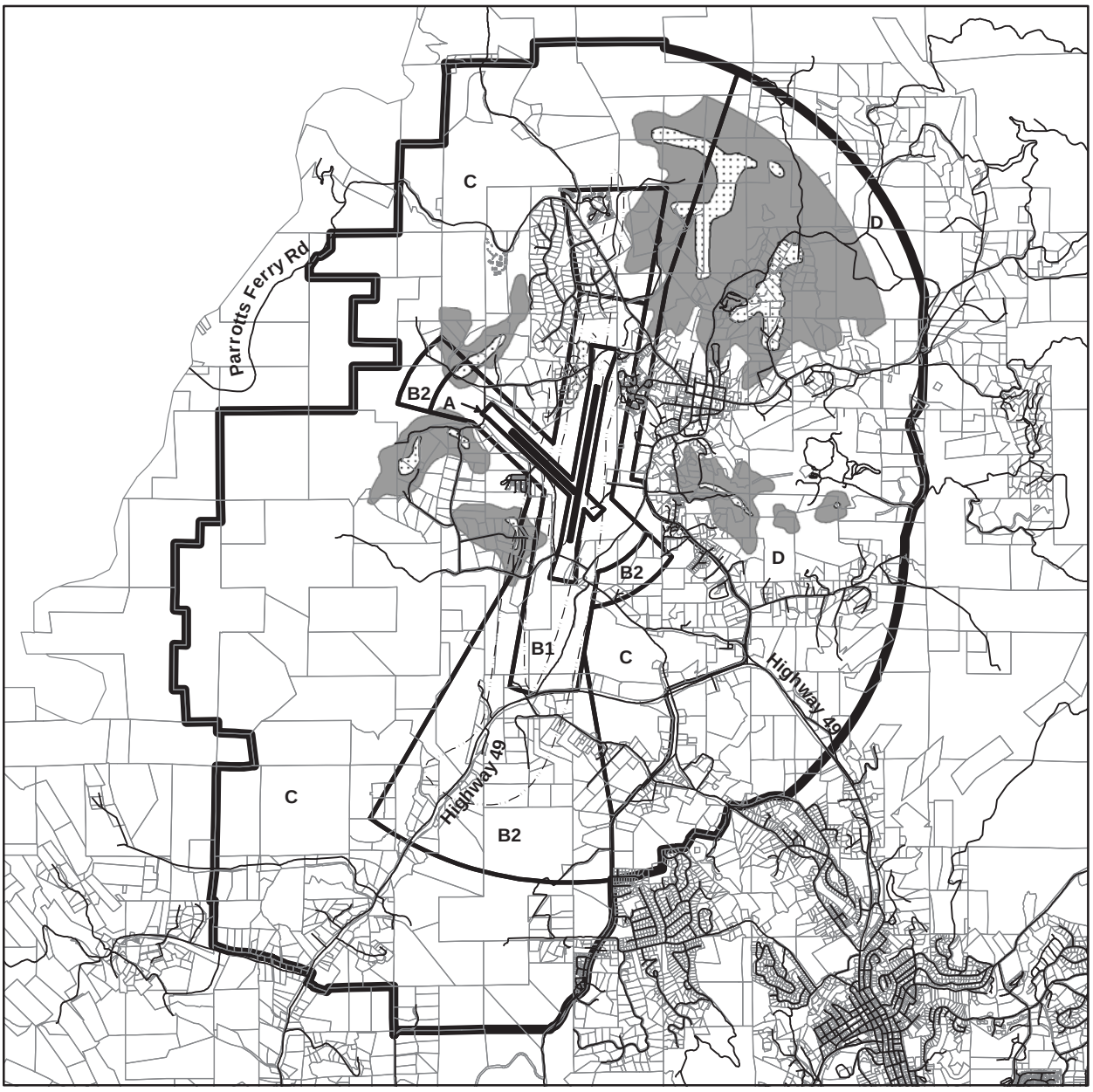
This page intentionally left blank.



Tuolumne County Fire
Hazard Severity Zones

Source: Cal Fire Fire and Resource Assessment Program, 2007

Figure 4.8-1



Source: Tuolumne County Ordinance Code, 2015

Columbia Airport Land Use Compatibility Plan Figure 4.8-2

A Runway Protection Zone

B1 Approach - Departure Zone

B2 Extended Approach - Departure Zone

C Common Traffic Pattern Zone

D Other Airport Environs

Critical Height Zone Overlay

Height Caution Zone Overlay

Noise Impact Zones CNEL 55, 60, & 65 dBa

Runway

Roads

Source: Tuolumne County Ordinance Code, 2015

Pine Mountain Lake Airport
Land Use Compatibility Plan

Figure 4.8-3

4.8.2 Impact Analysis

a. Methodology and Thresholds of Significance. For the purpose of this analysis, a significant impact would occur if physical changes that could be facilitated by buildout of the General Plan Update would result in the following conditions, listed in Appendix G of the CEQA Guidelines, without providing a mechanism to address potential site-specific impacts:

- *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;*
- *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;*
- *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school;*
- *Be located on a site included on a list of hazardous material sites compiled pursuant to State Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;*
- *Result in a safety hazard for people residing or working in the project area, if the project is located within an airport land use plan or in the vicinity of a private airstrip;*
- *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or*
- *Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.*

b. Project and Cumulative Impacts.

Impact HAZ–1 Potential development that could be facilitated by the General Plan Update near known hazardous material users, construction in areas with existing hazardous materials, or accidental releases of hazardous materials during transportation could expose individuals to health risks due to soil/groundwater contamination or emission of hazardous materials into the air. However, compliance with federal, state, and local regulations would reduce impacts. This is a Class III, *less than significant* impact.

The General Plan Update would facilitate development (including residences) within areas where hazardous materials could be stored or used, or where previous use has resulted in contamination of the site. Development of residential uses or schools in proximity to commercial or industrial uses that use or store hazardous materials could increase the risk of exposure to harmful health effects. In addition, hazardous materials are routinely transported by trucks along the major state routes and roadways, on railways, and via pipelines throughout the County; however, transportation of such materials is highly regulated to ensure the safety of the public. Negligence during use, construction activities, or accidents involving the transport of these materials could result in the release of hazardous substances into the environment, creating an emergency situation that could be detrimental to the public or environment.

The use or storage of hazardous materials within a flood zone also poses a hazard to people and the environment, because these materials could be released during flood events. Occasional flooding occurs in Tuolumne County, particularly in the winter and spring after heavy periods of rainfall, when excessive runoff causes streams and tributaries of the Stanislaus River and Tuolumne River to overrun their banks. The rivers and streams within Tuolumne County reside in canyons and valleys, resulting in the formation of very little floodplains. This localizes flooding and creates minimal damage (Emergency Operations Plan for Tuolumne County). A more detailed discussion of countywide flood hazards can be found in Section 4.9 *Hydrology and Water Quality.*

Older structures throughout the County could potentially contain asbestos containing materials (ACM) and/or lead-based paint (LBP). If demolition of these structures occurred, ACM or LBP could be released, resulting in adverse health effects. To prevent health risks to occupants or construction workers, proper ACM and LBP abatement and disposal procedures, described in the regulatory setting section above, are required to be undertaken whenever the demolition is considered for structures that were built prior to 1979.

To determine the full extent of possible hazardous materials sources, Phase I and Phase II hazardous materials site assessments are often necessary for suspect parcels. The first step in identifying sources of hazardous materials is to conduct a database search of federal, state, and local agency records. A database search is the principle source of information to verify the presence of hazardous materials/wastes in the County. The results of these searches include lists of sites with known, potential, or existing hazardous materials in a specified search area. Individual sites can occur on several lists for the same reason and are sometimes repeated under different names on the same list. As mentioned in Section 4.8.1 Setting, the State Water Resources Control Board GeoTracker database identifies 32 active cleanup sites and the Department of Toxic Substances Control EnviroStor database identifies one active cleanup site. Most of the identified sites are associated with gas stations or other automotive service related uses, mini-markets, warehouses, or industrial sites. Any development on one of these sites would be required to address the contamination to prevent the release of hazardous materials.

The General Plan Update's Safety Element contains several policies that would protect County residents and the environment from exposure to hazardous materials. The following goals and policies from the Safety Element would reduce potential hazardous materials risks.

Goal 6.S	*Minimize the risk of loss of life, injury, illness, property damage and alteration of established land use patterns resulting from the use, transport, treatment, and disposal of hazardous materials and hazardous wastes.*
Policy 6.S.1	*Verify that the use, storage, transport, treatment and disposal of hazardous materials and hazardous wastes within Tuolumne County complies with federal, state, and local regulations and safety standards.*
Policy 6.S.2	*Protect schools from the risks associated with facilities involved in the handling of hazardous materials or disposal of hazardous waste.*

Policy 6.S.3	*Require that industrial plants, mining operations and other facilities which handle or use hazardous materials or hazardous waste be constructed and operated in compliance with current standards for safety and environmental protection.*
Policy 6.S.4	*Segregate household hazardous waste generated within Tuolumne County from the municipal waste stream for proper disposal.*
Policy 6.S.5	*Seek funding for various waste collection activities through Tuolumne County.*

In addition to these policies, compliance with existing hazardous materials transportation, storage and disposal regulations as well as continuing participation and maintenance of the Countywide emergency response systems would reduce impacts related to hazardous material upset risk to a less than significant level.

Mitigation Measures. Compliance with federal, state, and local regulations, in combination with the General Plan policies listed above would reduce potential health risk impacts to a level of less than significant.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact HAZ-2 Development consistent with the proposed General Plan Update would introduce residential land uses into areas designated as Moderate or High Wildland Fire Hazard areas. However, compliance with General Plan policies and state and local regulations would ensure Class III, *less than significant,* impacts.

Fire protection in Tuolumne County is provided through a cooperative fire protection services approach. CAL FIRE provides administrative and operational services through a fire protection agreement to the County of Tuolumne, the Jamestown Fire Protection District, and the Groveland Community Services District. Other local fire agencies in Tuolumne County include the Tuolumne Fire District, Columbia Fire Protection District, Mi-Wuk Sugar Pine Fire Protection District, Strawberry Fire Protection District, and Twain Harte Community Services District. The Tuolumne County Fire Department (TCFD) adopted the Service Level Stabilization Plan in 1992 to address fire protection needs in the service area. The plan provides guidance for the development of fire services through acquisition of fire stations, apparatus and equipment, and the provision of personnel and support services. Additionally, the CAL FIRE Strategic Fire Plan for the Tuolumne/Calaveras Unit helps to plan fire prevention, protection, and suppression strategies and the Emergency Services Plan for Tuolumne County describes organizational responses to typical emergency situations in Tuolumne County, including fire situations.

Thirty-two communities within Tuolumne County are listed on the Strategic Fire Plan for the Tuolumne/Calaveras Unit as "Communities at Risk" from wildland fires. These communities

include Columbia, East Sonora, Jamestown, Tuolumne, and Twain Harte. Fire hazards in Tuolumne County range from moderate in the far western portion of the county to very high in the central portion. Communities in the very high fire hazard zone include Twain Harte, Moccasin, Columbia, and Harden Flat. These communities are surrounded by grass, brush, and timber lands. The eastern portion of Tuolumne County, approximately 70% of the county, is federally owned and forested. The majority of the very high hazard area is rural, however rural sprawl is present in Tuolumne County which has led to pockets of homes scattered throughout the wildlands.

Future development facilitated by the General Plan Update would be focused in the existing communities of Jamestown, Columbia, East Sonora, and Tuolumne. All of these communities are included on CAL FIRE's list of Communities at Risk list. To decrease the hazard of fire in these areas, the Strategic Fire Plan for the Tuolumne/Calaveras Unit provides guidance to reduce structural ignitability. Adherence to the California Building Code Chapter 7A, Fire Hazard Severity Zones and Building Standards and Materials, and Public Resource Code 4291, requiring property owners to maintain clearance of flammable vegetation of 100 feet from structures would also reduce the risk of fire.

The General Plan Update's Land Use Element and Safety Element include the following goals and policies, the implementation of which would reduce potential risk of injury or damage from wildland fires.

Policy 1.E.9 — *Require all new residential development to have adequate fire protection which may include design and maintenance features that contribute to the protection of the County from the losses associated with wildland fire.*

Policy 1.E.10 — *Maintain standards for the provision of public water and sewer systems and fire protection infrastructure for new residential development.*

Policy 1.F.12 — *Require all new commercial development to have adequate fire protection which may include design and maintenance features that contribute to the protection of the County from the losses associated with wildland fire.*

Policy 1.G.3 — *Encourage industrial development in specifically defined geographic areas having characteristics including:*

- *All weather surface access roads.*
- *Adequate fire protection.*
- *Located outside areas of very high fire hazard or can be made fire safe through facility design.*
- *Located outside areas where industrial development would create adverse noise and traffic impacts on nearby non-industrial development.*
- *Capability of being served by public water and public sewer systems, or capability of functioning on private systems without any adverse health impact.*
- *Located in proximity to transportation routes or air transportation.*

Policy 1.G.9	*Require all new industrial development to have adequate fire protection which may include design and maintenance features that contribute to the protection of the County from losses associated with wildland fire.*
Goal 6.I	*Provide structural fire protection to persons and property within Tuolumne County consistent with the needs dictated by the level of development and in accordance with current federal, state, and local fire protection agency regulations and policies.*
Policy 6.I.2	*Maintain adopted levels of fire protection services.*
Policy 6.I.3	*Require new development to be consistent with State and County regulations and policies regarding fire protection.*
Policy 6.I.4	*Determine that new development does not adversely impact fire protection services provided by local fire agencies within Tuolumne County.*
Policy 6.I.5	*Continue to encourage interaction and cooperation between the Tuolumne County Fire Department/CalFire and local fire agencies in responding to and recovering from emergency situations.*
Goal 6.J	*Provide protection to County residents and natural resources from the losses associated with wildland fire.*
Policy 6.J.1	*Consider the fire hazard severity zone and the risk of wildland fire when evaluating development applications in areas subject to wildland fire.*
Policy 6.J.2	*Reduce the exposure to risk from wildland fire to an acceptable level. High or very high fire hazard areas may be developed only if they can be made safe by planning, construction, or other fire safety measures.*
Policy 6.J.3	*Require new development to have adequate fire protection and to include, where necessary, design and maintenance features that contribute to the protection of the County from the losses associated with wildland fire.*
Policy 6.J.4	*Determine that the fire hazard to adjacent property and improvements will not be increased as a result of new development.*
Policy 6.J.5	*Promote public awareness of wildland fire hazards present within the County, as well as proper fire prevention and protection practices.*
Policy 6.J.6	*Strive to maintain all currently assigned assets at the Cal Fire Columbia Air Attack Base at the Columbia Airport.*
Policy 6.J.7	*Maintain firefighting assets within the County at current levels.*

Policy 6.J.8	*Encourage rapid post-fire assessment and rehabilitation of burned lands to limit soil erosion, protect water quality, minimize flooding, and restore damaged landscapes.*
Policy 6.J.9.	*Protect natural resources from the effects of wildland fire consistent with fire protection planning documents adopted by Tuolumne County and Cal Fire.*
Policy 6.J.10	*Require property owners to maintain wildlands in a fire resistant manner consistent with Section 4291 of the Public Resources Code. Assist fire protection agencies in their efforts to enforce Section 4291.*
Policy 6.J.11	*Encourage the eradication of invasive plant species to protect native habitats, conserve agricultural land, support ecological diversity, and reduce the wildland fire hazard.*
Policy 6.J.12	*Support efforts to restore sustainable landscapes and functioning ecosystems following wildland fire.*
Policy 6.J.13	*Consider effects on cultural resources, wildlife habitat, and special status species when developing wildfire prevention, protection, and recovery plans.*
Policy 6.J.14	*Identify assets that require protection from wildland fire and prioritize their protection needs.*
Policy 6.J.15	*Encourage resolution of conflicts between wildland fire protection and habitat conservation for wildlife.*
Goal 6.K	*Establish and maintain a codified fire protection risk management strategy which requires new development within Tuolumne County to incorporate or supply fire protection infrastructure and improvements necessary so that such development does not exceed the capabilities of the County's fire protection resources.*
Policy 6.K.1	*Review County fire protection regulations to see that they provide for the protection of the public from structural and wildland fire.*
Policy 6.K.2	*Apply contemporary fire prevention and protection standards to new development as outlined in the 1992 Tuolumne County Fire Department Service Level Stabilization Plan.*
Policy 6.K.3	*Require fire prevention and protection measures to be built into new development projects.*
Policy 6.K.4	*Determine the impact proposed development will have on the provision of fire protection services and maintain the established level of service as outlined in the 1992 Tuolumne County Fire Department Service Level Stabilization Plan.*

Policy 6.K.5	*Require that fire flow be provided for development of property designated Commercial, Industrial, Business Park, mixed Use, Recreational, Low Density Residential, Medium Density Residential, and High Density Residential.*
Policy 6.K.6	*Require that new development be provided with access roads which allow for safe and efficient response by emergency apparatus and the safe evacuation of residents in the event of structural or wildland fire.*
Policy 6.K.7	*Require that residential development provide for defensible space around structures.*
Policy 6.K.8	*Require that street and structural identification are provided to assist in emergency response.*
Goal 6.L	*Establish a system for the orderly expansion of fire protection services within Tuolumne County consistent with the needs dictated by County growth and development.*
Policy 6.L.1	*Construct new fire protection facilities as needed within the jurisdiction of the Tuolumne County Fire Department/CalFire in order to maintain the desired Insurance Services Office (ISO) ratings.*
Policy 6.L.2	*Maintain emergency communications systems to support fire suppression efforts.*
Policy 6.L.3	*Support the recruitment and training efforts of the Tuolumne County Fire Department and local fire agencies within the County.*
Goal 6.M	*Establish reliable sources of funding for fire protection services in Tuolumne County in order to maintain the services at an acceptable level.*
Policy 6.M.1	*Establish or redirect existing revenue sources to provide a stable, adequate level of funding for the Tuolumne County Fire Department.*
Policy 6.M.2	*Improve fire safety and offset the need for increased fire department staffing and equipment by requiring installation of built-in fire suppression equipment and fire protection measures in new development.*
Goal 6.N	*Consult with all affected fire protection agencies on fire protection planning within Tuolumne County.*
Policy 6.N.1	*Actively involve fire protection agencies within Tuolumne County in land use planning decisions.*
Policy 6.N.2	*Encourage all fire protection agencies (federal, state, and local) within the County to maintain communication with each other and with the Office of*

	Emergency Services and the Community Resources Agency to promote and integrated approach to fire protection planning.
Policy 6.N.3	*Integrate County policies and land use designations with the strategies of the fire protection agencies within the County to provide adequate service to existing, as well as, future development.*
Policy 6.N.4	*Actively support efforts to maintain and improve federal and state fire service capabilities.*
Policy 6.N.5	*Consult with CalFire, the U.S. Forest Service, the National Park Service, and local fire agencies on fire prevention programs in order to maximize the distribution of information to the public.*
Policy 6.N.6	*Support the Strategic Fire and Resource Protection Planning program within Tuolumne County.*

With adherence to existing regulations and to General Plan goals and policies, impacts related to wildland fires would be reduced to a less than significant level.

Mitigation Measures. Compliance with the above policies and existing regulations would reduce the risk of injury or damage from wildland fires to a less than significant level. No mitigation is required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact HAZ-3 **Public and private airports in Tuolumne County could create safety hazards for nearby development. Careful land use planning in accordance with proposed General Plan policies and continued coordination with the Tuolumne County Airport Land Use Compatibility Plan would ensure impacts are Class III, *less than significant*.**

Most of the public safety risk created by airports is attributed to aircraft accidents in the vicinity of populated areas. Land use planning considerations can help reduce risks to the public by preventing dense residential development, schools, hospitals, or other densely populated uses that could put residents or workers in harm's way, should an accident occur.

Existing airport facilities in Tuolumne County are the Columbia Airport and Pine Mountain Lake Airport. The two airports are included in the Tuolumne County Airport Land Use Compatibility Plan (ALUCP). The ALUCP describes land use and development restrictions within the designated safety zones, as illustrated on Figures 4.8-2 and 4.8-3.

Development facilitated by the General Plan Update would occur primarily in and around the existing four Community Plan areas of the County. The Columbia Airport is located near downtown Columbia and the Pine Mountain Lake Airport is located to the southeast near Groveland and Pine Mountain Lake. The ALUCP limits residential development around the

airports. While future development could conflict with the requirements of the ALUCP, the General Plan Update contains policies to ensure land use compatibility on a project-specific basis. The ALUCP also prevents any above-ground bulk storage of hazardous materials in Zone B2, and prohibits any other uses that may cause hazards to flights within any of the safety zones.

The General Plan Update's Land Use Element, Circulation Element, and Safety Element include the following policies, the implementation of which would reduce potential safety hazards.

Goal 1.B	*Minimize conflicts between incompatible land uses.*
Policy 1.B.2	*Protect public facilities, such as the County's airports, from the infringement of incompatible land uses.*
Policy 1.B.3	*Maintain information in the County's land use diagrams to identify military "low-level flight paths."*
Policy 1.E.3	*Separate or buffer new urban residential development from land uses that potentially conflict with housing, such as agriculture, mining, industry, airports, and sewage treatment facilities.*
Policy 2.E.1	*Support the development of the Columbia and Pine Mountain Lake (PML) Airports in accordance with the Tuolumne County Airport Land Use Compatibility Plan, and existing and future Master Plans.*
Policy 6.J.6	*Strive to maintain all currently assigned assets at the CalFire Columbia Air Attack Base at the Columbia Airport.*

With adherence to existing regulations and to General Plan goals and policies, impacts related to airport safety hazards would be reduced to a less than significant level.

Mitigation Measures. Beyond compliance with existing and proposed General Plan policies, no mitigation measures are required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact HAZ-4 Potential development under the General Plan Update will not impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan. *No Impact* (Class IV) would result.

Implementation of the *Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan* (HMP)is a coordinated effort between Tuolumne County, the City of Sonora, the Tuolumne Utilities District (TUD), the Sonora Union High School District, the Groveland Community Services District, Twain Harte Community Services District, Mi-Wuk Sugar Pine Fire Protection District, Belleview Elementary School District, Big Oak Flat-Groveland Unified School District, Jamestown Sanitary District, Columbia Fire Protection District, Columbia Union School District,

Curtis Creek School District, Jamestown Elementary School District, Sonora Elementary School District, Summerville Elementary School District, Summerville Union High School District, Twain Harte Long Barn School District, and the Tuolumne Band of Me-Wuk Indians to effectively deal with natural catastrophes that affect the General Plan area.

The Tuolumne County Emergency Services Plan delineates the County's procedures and policies in response to a significant disaster, including extreme weather, flood or dam failure, earthquakes, hazardous materials, terrorism or civil disturbance, transportation accidents, and wildland fires. The Emergency Services Plan assists with emergency response through:

- Establishing emergency response policy;
- Identifying authorities and assigns responsibilities for planning and response activities;
- Identifying the scope of potential hazards;
- Identifying other jurisdictions and organizations to coordinate planning with;
- Determining emergency organization structure;
- Establishing policies for providing emergency information to the public;
- Outlining preplanned response actions, describes the resources available to support response activities;
- Outlining actions to return County operations to normal;
- Guiding area governments through recovery;
- Establishing responsibilities within the County for the maintenance of the overall emergency preparedness program;
- Outlining the process for ordering and rendering mutual aid; and
- Facilitating the continuity of governments.

The Safety Element of the proposed General Plan Update incorporates the HMP and Emergency Services Plan and implements the policy recommendations for the County's area of responsibility as guiding policies in dealing with natural disasters. Examples of the General Plan's role in mitigating the impacts of emergency situations is to ensure that emergency access routes are maintained and to assess the vulnerability of critical facilities in the plan area.

The General Plan Update's Safety Element includes the following policies related to emergency preparedness.

Policy 6.B.2	*Limit the extent of development in seismically hazardous areas in such a way as to be commensurate both with the degree of hazard involved and with the public costs which would be incurred if emergency or remedial actions became necessary.*
Policy 6.G.7	*Encourage participation in a cooperative mutual aid and emergency response plan between districts of similar functions to provide assistance at time of a natural disaster.*
Policy 6.G.8	*Ensure that all vital/critical facilities are protected from the effects of natural hazards to the maximum extent feasible.*

Policy 6.H.1	*Reduce the potential for damage to property within the 100 year floodplains as designated on the Federal Emergency Management Agency Flood Insurance Maps and other areas prone to flooding due to rain or dam failure, through limitations on land use.*
Policy 6.H.3	*Review all projects proposed within potential inundation areas due to dam failure as identified on the dam failure inundation maps designated by the Office of Emergency Services (OES) and evacuation plans on file with the County Office of Emergency Services for that area. If a project presents a direct threat to human life, appropriate actions shall be taken, including restriction of development in the subject area.*

In addition to the Safety Element Policies, Implementation Programs 6.G.d, 6.H.d, 6.I.f, 6.P.a, and 6.S.a direct the County to implement the HMP to protect life, safety, and property. Implementation program 6.J.z calls for implementation of the Emergency Services Plan in the event of major wildland fires. With adherence to the existing HMP and to General Plan goals and policies and implementation of the Emergency Services Plan in response to major emergencies, there would be no impacts related to an emergency response plan or emergency evacuation plan.

Mitigation Measures. Beyond compliance with existing and proposed policies, no mitigation measures are required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

This page intentionally left blank.